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probably in most of the early so-called Ratite birds. These questions can only be settled by further excavations in the Libyan Desert and the discovery of more complete material.

#### EXPLANATION OF PLATE V.

Mullerornis betsilei M .- Edw. & Grand.

Fig. 1. Pelvis from side, p. 163.

2. Femur, posterior surface, p. 165.

3. anterior

4. Tibio-tarsus, posterior surface, p. 166. anterior

5.

8.

Fibula, p. 166.
 Tarso-metatarsus, posterior surface, p. 166.

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anterior 22 ,,

All the figures <sup>1</sup>/<sub>4</sub> natural size.

## February 2, 1904.

### H.G. THE DUKE OF BEDFORD, K.G., President, in the Chair.

Mr. R. Lydekker exhibited and made remarks upon a head of the Alaskan Moose (Alces gigas of American naturalists) which had been obtained by Lord Elphinstone in Alaska, and mounted by Mr. Rowland Ward.

Mr. J. E. S. Moore, F.Z.S., exhibited a series of lantern-slides illustrating the histology of cancer in animal tissues.

The following papers were read :---

1. On a Collection of Mammals from British Namaqualand, presented to the National Museum by Mr. C. D. Rudd. By OLDFIELD THOMAS, F.R.S., and HAROLD SCHWANN, F.Z.S.\*

[Received December 15, 1903.]

# (Plate VI.<sup>†</sup>)

By the generous help of Mr. C. D. Rudd, Mr. C. H. B. Grant, who had previously collected at Deelfontein the fine series of Mammals presented by Col. A. T. Sloggett, has been enabled to continue in the Cape Colony collecting material for the British Museum.

\* Diagnoses of the new forms published in Abstracts P. Z. S. 1904, no. 2, pp. 5, 6 (Feb. 9th).

+ For explanation of the Plate, see p. 183.

After a short stay in the Cape Peninsula, where he obtained useful topotypes of several long-known species, Mr. Grant went to Little Namaqualand in March 1903, and settled at Klipfontein, a place some 80 miles inland of Port Nolloth, at an altitude of about 1000 metres. He also stayed for shorter periods at Anenous, north of Klipfontein, 50 miles from the coast (alt. 600 m.), and at Port Nolloth itself.

So far as the British Museum is concerned, Namaqualand has been hitherto almost entirely neglected, the few specimens obtained there by Dr. Andrew Smith about 1830 (e. g. *Petromys typicus*, *Otomys brantsii*, &c.) and the little set collected by Dr. R. Broom at Port Nolloth in 1897 (including the type of *Otomys broomi*) being the only mammals that the Museum has ever received from that country. For the South African Museum Mr. Péringuey also collected a certain number at Klipfontein, as recorded by Mr. W. L. Sclater, but he does not seem to have come upon any of the new forms we now find it necessary to describe.

This is the first occasion in the history of Cape zoology that any considerable series of perfectly made modern skins have been compared, species by species, with another such series as that prepared by Mr. Grant at Deelfontein and the Cape; and we have thus been able to see what is the influence on the mammal fauna of the more northern and desert climate of Namaqualand. As might be expected, this shows itself in a general pallor, which is well exemplified in such forms as *Macroscelides melanotis*, *Cynictis penicillata pallidior*, *Otomys broomi* and *brantsii*, and *Arvicanthis pumilio cinereus*. On the other hand, the two animals which we have thought worthy to be distinguished as species instead of subspecies, *Herpestes ruddi* and *Bathyergus janetta*, are both darker, especially on the back, than their Cape representatives.

Of these two the Mongoose is a very distinct and handsome animal, easily separable from the Cape *Herpestes pulverulentus* by its blackened back and tail-tip. *Bathyergus janetta* again is of interest as being the second species of so peculiar and long-known a genus as *Bathyergus*, otherwise confined to the Cape.

In all, therefore, the Namaqua collection, which numbers about 160 well-prepared skins, is a most valuable accession to the Museum, and one for which we have every reason to be grateful to its donor, Mr. Rudd.

The following are Mr. Grant's notes \* on the character of the country :---

"The appearance of the country as we proceed inland by rail, from the coast, strikes one as looking particularly dry and forbidding. Port Nolloth itself is on white sand which runs inland for perhaps ten miles, dotted here and there with milk- and Tybushes and a little grass in some of the water-courses. About the ninth or tenth mile on the railway the white sand gives place to

<sup>\*</sup> Mr. Grant's notes on the character of the country and the habits of the animals were received too late for reading, but have been inserted since.—Feb. 20, 1904.

dry yellow or reddish-yellow sandy flats, stretching away on each side towards low or high mountain-ranges. Most of these have a yellowish appearance, the low stony rises or kopjes looking for all the world like huge heaps of gravel.

"Water is very scarce and is found in natural springs, either surface or by sinking; frequently the water-holes are considerable distances apart, and in the back country are almost impossible to find without a guide.

"The rainfall during my stay at Klipfontein was considered to have been the best for some years, being as follows:—

April	0.13  in.
May	`1·41 ,,
June	0.96 ,,

A little fell in July and (at Port Nolloth during my short stay there) in August.

"Klipfontein, at an altitude of 3104 feet, is a wayside station on the railway between Port Nolloth and O'okiep, 54 miles by rail from the former place, situated on the top of the mountain-ranges which run between the Orange River and the Kamiesberg.

"The country is a series of mountains and small flats cut through with old water-courses, which either run down to the small flats on the top of the mountain-range or the lower flats running towards the coast. Often they form huge kloofs or cañons, some hundreds of feet in depth and 200 or 300 yards across, with enormous krantzes towering above and around the outer edges.

"The principal vegetation consists of several species of milkbush and a small green bush some 2 or 3 feet in height, on which the wild buck and domestic stock feed; the several species of water- and rice-plants, a few scattered bushes and small trees on the kloofs and mountains, thorns in some of the river-beds, and the curious cookrerboom complete my rough list.

"Within a few miles of Klipfontein, on both the high and low ground, traps were set in every conceivable place, such as under bushes or rocks on the open flats, in the dry river-beds and kloofs. The most productive ground, however, was the dry river-beds, the rocky slopes and krantzes of the larger mountains, and the small stony kopjes on the flats."

1. RHINOLOPHUS ÆTHIOPS Peters.

d. 436 a. ♀. 420. Klipfontein.

2. NYCTERIS CAPENSIS Smith.

2. 459. Anenous.

Q. 429, 421. Klipfontein.

3. MINIOPTERUS SCHREIBERSI Natt.

J. 451. Klipfontein.

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#### 4. MACROSCELIDES RUPESTRIS Smith.

♂. 510, 453, 501, 425. ♀. 390, 468, 477. Klipfontein.

*M. rupestris* was first obtained by Smith from the "rocky mountains of Namaqualand," so that these specimens are practically topotypes.

The same author's *M. edwardi* is commonly considered to be a synonym of *M. rupestris*, but among Mr. Grant's collection from Deelfontein there is a series of a *Macroscelides* apparently distinct from the latter and probably referable to *edwardi*. This animal is darker and more greyish, its tail is less heavily pencilled, and its eyes have scarcely a trace of white rings.

"'Oliphant-muis' or 'Klas-nese' of the Dutch.

"Found only on the kopjes and in stony places. Remarkably quick when disturbed in getting from rock to rock and disappearing from view. It is curious to watch it dusting itself in some patch of loose sand among the rocks, its actions reminding one very much of a dog."—C. H. B. G.

5. Macroscelides melanotis Ogilb.

♂. 461, 393, 409. ♀. 423, 484, 433, 435, 531, 519. Klipfontein.

Q. 555. Port Nolloth.

This good series enables us to make for the first time a reliable comparison between M. melanotis and its ally M. proboscideus.

The former proves to be readily distinguishable by its much paler colour throughout and by its blacker and more heavily tufted tail. " 'Oliphant-muis' or 'Klas-nese' of the Dutch.

"Found only on the flats among the rocks and other cover. When disturbed it dodges round bushes and across open places at

an amazing rate, with its tail in the air, frequently taking cover in the nest of *Otomys broomi*.

"Often observed in pairs."-C. H. B. G.

6. Myosorex varius Smuts.

J. 438. Port Nolloth.

Quite similar in colour to a series from the slopes of Table Mountain.

This specimen is abnormal in not having any trace of the minute premolars, the fourth unicuspids, usually present just anterior to the large  $p^t$  in the upper jaw. Out of about a dozen examples from the Cape the same abnormality occurs on both sides in one skull, and on one side in another.

"'Skearer-muis' of the Dutch.

"One specimen was sent to me from Port Nolloth, but I could not find out exactly where it had been caught."—C. H. B. G.

7. Felis caffra Desm.

♂. 512, 456. ♀. 492, 509, 479, 463. Klipfontein.

"' Wilde-kat' of the Dutch.

"Not particularly common, frequenting the kloofs and clumps

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of rocks on the open flats. Occasionally seen in the daytime, amongst the bushes on the flats, where they were sunning themselves when disturbed."—C. H. B. G.

#### 8. GENETTA FELINA Thunb.

J. 450, 534. Q. 440. Klipfontein.

" ' Misselyat-kat' of the Dutch.

"Not by any means common. Frequenting the deeper and rougher kloofs, where large rocks and the thickest bush prevails. Never seen during the day and trapped only at night. Apparently feeds principally on beetles and other insects."—C. H. B. G.

9. HERPESTES RUDDI Thos. (Plate VI. fig. 1.)

Herpestes ruddi, Thos. Ann. Mag. N. H. (7) xii. p. 465, (1903).

J. 439, 508, 418, 507, 511, 406, 471, 474, 467, 527, 523. Q. 411, 407, 448, 494, 526, 533. Klipfontein.

This handsome animal has already been described, and we now give a figure of it.

The discovery of so distinct a carnivore within the boundaries of Cape Colony is a striking example of the incompleteness of our present knowledge of mammals generally, and the value of such systematic surveys as that which Mr. Rudd has enabled Mr. Grant to carry on.

"'Commy-jee-baat muishond' of the Dutch. 'Teep'\* of the Namaqualand Hottentots.

"Extremely common. Very difficult to avoid trapping them, as they are nearly always the first animals caught when traps are placed in a new spot. Frequenting kloofs, mountains, and the dry river-beds near clumps of rocks, in fact wherever there is sufficient cover. Sometimes seen in the daytime on the hunt in the big krantzes and larger kloofs. Food apparently consists of beetles &c., although I believe they destroy numbers of young dassies. Often taken in pairs."—C. H. B. G.

10. Cynictis penicillata pallidior Thos. & Schw.

Cynictis penicillata pallidior Thos. & Schw. Abstr. P. Z. S. 1904, no. 2, p. 5 (Feb. 9th).

J. 399, 415, 419. Q. 404, 405. Klipfontein.

Similar to the typical C. penicillata but lighter throughout.

Central area of back "buff-yellow" of Ridgway compared with the "ochre-yellow" of the Cape form, the flanks rather lighter; under surface dull "cream-colour"; head like back, cheeks and neck much lighter than in *penicillata*, grizzled whitish. Back of ears in most specimens prominently dark brown, contrasting with the general colour of the head; a postauricular patch light yellow, not grizzled; fore limbs as in *penicillata*; under surface of hind limbs creamy white instead of "ochre-yellow," hind feet light creamy yellow. Tail about two-thirds as long as the head

\* "Te" stands for a click.

and body, broad rather than round, very bushy, the breadth across the outstretched tail-hairs about 5 inches, its upper surface coloured like the back; the terminal two inches pure white; under surface creamy proximally, becoming gradually whiter distally. Individually the hairs of the under surface are creambuff basally and white terminally, with a dark brown subterminal band. The tail of true *penicillata* is much darker, being "ochraceous" above, pencilled with black, and nowhere lighter than "ochraceous-buff" below, except at the tip, the light part of which barely exceeds an inch in length and is not so pure a white as in *pallidior*.

Dimensions of the type, measured in the flesh:—Head and body 328 mm.; tail 269; hind foot 76; ear 35.

Skull—basal length 64 mm.; greatest length 70.5 mm.

Type. Male. Original no. 399. Collected 7 April, 1903.

This subspecies differs from the typical *C. penicillata* in the general lighter colour of its upper surface and the much more conspicuous white tip to its tail.

None of the names currently placed as synonyms of *C. penicillata* appear to refer to the Namaqua *Cynictis*.

"" Rooi-meerkat' of the Dutch. 'Heryky' of the Namaqualand Hottentots. Habits similar to those of *Suricata suricatta*. Apparently not found in the low country near the coast."— C. H. B. G.

11. SURICATA SURICATTA Schr.

Viverra suricatta, Schr. Säug. iii. pl. 117 (1776) (ex Buff.).

*Viverra tetradactyla*, id. *t. c.* p. 434 (1777).

♂. 473, 536. ♀. 475, 528, 472. Klipfontein.

"' Meerkat' of the Dutch. 'Hcryky' of the Namaqualand Hottentots.

"They make their burrows in the open veldt and under the clumps of rocks scattered about the flats. Although they are seldom found in great numbers, near Port Nolloth there are two or three colonies of considerable size.

"In this part of the country they seem very restless, constantly shifting their quarters.

"Exclusively diurnal. It is a pretty sight to see them sitting perfectly upright outside their holes, sunning themselves in the early morning.

"They apparently feed principally on beetles."-C. H. B. G.

12. VULPES CHAMA Smith.

♂. 410, 416, 470. ♀. 424, 476, 396, 397. Klipfontein.

This pretty Fox has hitherto been almost unrepresented in the Museum Collection, so that the present series—practically topotypical—forms a very welcome accession.

" 'T<sup>c</sup> \* omma yackal' of the Dutch.

\* T° stands for a click.

"Very common, frequenting the more open country and sleeping during the day in the dry river-beds and the stony kopjes on the flats. They are very wary, and when disturbed usually get up out of range.

"Trapped at night in their sleeping-places or near meerkats' burrows, where possibly they were on the look-out for a late straggler.

"Their food consists of beetles, &c."-C. H. B. G.

13. ICTONYX CAPENSIS Kaup.

♂. 490, 530. ♀. 497, 503. Klipfontein.

J. 537, 538. Anenous.

"' Vit-rôq (white-backed) muishond' of the Dutch.

"Frequenting both the kloof and the open flats. This animal is very destructive to poultry, killing them for the sake of their blood only. Usually found in pairs and often caught one after the other in the same trap."—C. H. B. G.

14. Mellivora ratel Sparrm.

♀. 464, 465. Klipfontein.

Indistinguishable from Cape specimens.

"' Ratel' of the Dutch,

"Not uncommon. The two specimens were secured in an old ant-bear hole on the sandy flats close to Anenous."—C. H. B. G.

15. GRAPHIURUS OCULARIS Smith.

**Q.** 417, 486. Klipfontein.

These specimens represent the *Graphiurus elegans* of Ogilby\*, of which the type was collected by Capt. Alexander in Damaraland.

The tail is rather whiter than that of the Cape form, and the animals may perhaps hereafter prove subspecifically separable, in which case they would bear the name of G, ocularis elegans.

" 'Gemsbok-muis' of the Dutch.

"Rare, possibly frequenting all rocky places, as in the Karoo. Exclusively nocturnal. Where these two specimens were caught, traps were kept set for some weeks, but yielded no further results."—C. H. B. G.

16. Desmodillus Auricularis Smith.

Gerbillus auricularis Smith, S. Afr. Quart. Journ. ii. p. 160 (1834).

Desmodillus (g. n.) auricularis Thomas & Schwann, Abstr. P. Z. S. 1904, no. 2, p. 6 (Feb. 9th).

Q. 458. Anenous.

A topotype of the species, which was described by Smith from a specimen captured by him in "the mountains of Little Namaqualand."

This Gerbille has been variously regarded as a true Gerbillus

\* P. Z. S. 1838, p. 5.

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and as a *Pachyuromys*, but after careful consideration we think that it needs a special generic name. From *Gerbillus* it differs, among other characters, by its shorter tail and very much larger bulke, in which respects it approaches *Pachyuromys*. But its thin, unswollen tail, its narrow faintly-grooved incisors, normally shaped palatine foramina, less exaggerated bulke, and widely different geographical distribution prevent its being referred to the latter genus, towards which, however, it may be regarded as forming a link ( $\delta \epsilon \sigma \mu \delta s$ ).

Mr. Grant also obtained an example of this species when collecting for Col. Sloggett at Deelfontein.

"This animal was reported as being very common, especially in some of the old stone blockhouses along the line."—C. B. H. G.

17. OTOMYS BROOMI Thos.

Ann. Mag. N. H. (7) x. p. 313 (1902).

J. 466, 434, 462. Q. 437, 432, 460, 524. Klipfontein.

This species, the Namaqualand representative of  $\overline{O}$ . unisulcatus, was discovered by Dr. Broom at Port Nolloth in 1897. The Klipfontein series quite agrees with his two specimens as far as regards colour and the great size of the ears, but the bulke are perhaps less definably larger.

"' Veldt-rot' of the Dutch.

"Frequenting the open flats and the lowest slopes of the mountains and kopjes, where it makes a nest of sticks about 2 feet high in the bottom of a milk-bush, with a hole close beneath the surface. Above ground regular runs connect one nest with another.

"Apparently not more than one pair inhabits each nest, and when disturbed from it will run along their well-worn tracks to another close at hand.

"A vegetarian."—C. B. H. G.

18. OTOMYS BRANTSII Smith.

♂. 446, 441. ♀. 400, 395, 403, 394, 455, 442. Klipfontein.

J. 388. Port Nolloth.

**Q**. 389. Anenous.

The original *Euryotis brantsii* of Smith was described from two specimens, male and female. The former was "tinted strongly with fulvous" and "pencilled freely with black"; the latter, which the National Museum still possesses, is distinctly paler, and agrees very well in colour with the above series from Klipfontein. As this locality is very near the one quoted by Dr. Smith, "toward the mouth of the Orange River," it would be advisable to accept the female as the type and to ignore the darker male, which may have come from quite another region. The Namaqua series might therefore be treated as topotypes.

Compared with these the set collected at Deelfontein are sufficiently different to require subspecific distinction.

The new form may be called Otomys brantsii luteolus, and may

be distinguished by the brownish fulvous of its dorsal area, which approaches Ridgway's "russet," in strong contrast with the paler, almost "cream-buff" of *O. brantsii*. The back is also of a more uniform colour, less markedly lightening on the sides. Under surface like that of the typical form. Tips of the hairs on the head, back, and sides black. Tail strong buffy yellow, darker than in *brantsii*, a line along the top and the whole of the tip black.

Dimensions of the type, measured in the flesh:—Head and body 145 mm.; tail 76; hind foot 25; ear 16.

Skull—greatest length 34.7 mm.; basilar length 27.5; greatest breadth 21.

Hab. Deelfontein, Central Cape Colony.

*Type.* Female. B.M. no. 2.9.1.47. Collected 8 April 1902. Presented by Col. A. T. Sloggett.

The grooving of the incisors in *O. brantsii* seems always to have been considered the same as in *O. unisulcatus*, *i. e.* with one groove on the outer part of the upper incisors and none on the lower. But we find a distinct groove on the inner edge of the upper pair in addition to the larger groove on the outer half. There is also an indistinct flattening, hardly amounting to a groove, on the outer half of the lower incisors.

"'Sand-rot' of the Dutch.

"Very common; found all over the high and low flats, but not observed within ten miles of the coast. They are gregarious, living in colonies and digging their burrows in the open sandy veldt. A diurnal animal only and a vegetarian. Numbers of them are to be seen sitting on their haunches outside their holes. On the appearance of danger they disappear at once, each with a sharp squeak."—C. H. B. G.

19. Mus auricomis de Wint.

δ. 428, 401, 430, 497, 445, 457. Q. 504, 422, 498, 489, 496, 454, 447, 415. Klipfontein.

Very similar to the original series collected by Mr. Selous in Matabeleland.

"Entirely a rock rat, very common everywhere on the flats and mountains where there are rocks. Apparently entirely nocturnal and vegetarian."—C. H. B. G.

20. ARVICANTHIS PUMILIO CINEREUS Thos. & Schw.

Arvicanthis pumilio cinereus Thos. & Schw. Abstr. P. Z. S. 1904, no. 2, p. 5 (Feb. 9th).

♂. 427, 493, 391, 431, 488, 426, 436. ♀. 499, 514. Klipfontein.

J. 540. Port Nolloth.

General colour of the face and upper surface, in the majority of specimens, "smoke-grey," compared with the buffy-yellow of the true *pumilio*. Long hairs tipped with orange-yellow or black, dirty white proximally; under-fur black at base. Flanks 12\*

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decidedly greyer than in *A. pumilio*; ears bright tawny as in the typical form, but more strongly contrasted owing to the greyer colour of the head and neck.

Dimensions of the type, measured in the flesh :—Head and body 118 mm.; tail 128; hind foot 28; ear 18.

Skull—basilar length 24 mm.; length of upper tooth-series 5. Hab. Klipfontein.

Type. Female. Original no. 514. Collected 16 June, 1903.

This Namaqua representative of the common A. *pumilio* may be distinguished from its Cape ally by its paler, greyer colour, and especially by its much greyer flanks.

"' Streep-muis' of the Dutch.

"Inhabiting the heaps of stones along the railway and the stone walls of the native gardens.

"Common and exclusively diurnal. It may frequently be seen sunning itself on some flat rock or sandy patch in the heat of the day. Its food, so far as I have seen, is entirely vegetable."— C. H. B. G.

21. BATHYERGUS JANETTA Thos. & Schw. (Plate VI. fig. 2.)

Bathyergus janetta Thos. & Schw. Abstr. P. Z. S. 1904, no. 2, p. 6 (Feb. 9th).

J. 551, 541, 562, 544. Q. 546, 548, 545, 552, 554, 564, 553. Port Nolloth.

Much smaller than *B. maritimus*, the back with a dark median band.

General ground-colour not materially different from that of the Cape species, *i. e.* "drab-grey"; but the whole dorsal area, for a breadth of about 2 inches, is seal-brown, contrasting markedly with the drab-grey of the shoulders and sides. Under surface blackish-slaty, rather darker than in *B. maritimus*; chin with a white sharply-defined patch. Head wholly blackish, except that there is sometimes a narrow white line along the top of the nose. Area round ear white, bright colour of flanks commencing just behind ear. Proximal part of limbs dark slaty; hands and feet white. Tail broad, flattened, its central part pale brown, its fringing hairs dull whitish.

Skull conspicuously smaller than in *B. maritimus*, its shape, in fully adult examples, more like that of young specimens of the Cape species. Brain-case smooth and rounded, the ridges and crests at a minimum. Interorbital region broad, smoothly rounded. Proportions of nasals as in *B. maritimus*. Palate less produced backwards. Bullæ rather more swollen.

Incisors deeply and simply grooved as in *B. maritimus*, their breadth about as in half-grown specimens of that species.

Dimensions of the type, measured in the flesh:—Head and body 181 mm.; tail 43; hind foot (s.u.) 34.

Skull—greatest length 46.5 mm.; basilar length 40.5; greatest breadth 28.7; nasals  $3.6 \times 15.4$ ; interorbital breadth 9.5; least breadth behind zygomata 18.8; greatest mastoid breadth 24; diastema 14.4; palate length 14.5; greatest diameter of bulke 1904.]

13.8; length of upper tooth-series (crowns) 8.4; combined breadth of upper incisors 5.

Type. Female. Original no. 545. Collected 3 August, 1903.

This handsome and distinct Mole-Rat is widely different from the only hitherto known species of the genus. A reference to the occurrence of Bathyergus in Namaqualand is given by W. L. Sclater\*, but he tells us that he had not seen examples from there, and his informant had no doubt mistaken B. janetta for B. maritimus.

In this species there is a marked difference in size and in the development of the cranial ridges between the skulls of males and females, much more so, indeed, than appears to be the case in B. maritimus. An old male skull of B. janetta measures 48.5 mm. in basilar length, with a zygomatic breadth of 36 mm.

"' Mollee' of the Dutch.

"Common on the white sands near Port Nolloth, where it makes regular runs and mounds.

"It is a great nuisance to the platelayer on that section of the line, undermining the sleepers and often causing a dangerous drop in the metals when a train passes."-C. H. B. G.

22. PETROMYS TYPICUS Smith.

d. 444, 517, 522, 518. Q. 487, 480, 500, 443, 513, 529, 469. Klipfontein.

The Museum now obtains for the first time a good series of this uncommon animal, which was described by Smith in 1831 from specimens collected by him "upon the rocky hills which occur towards the mouth of the Orange River." Dr. Broom also obtained some examples at Port Nolloth.

The dimensions of an adult male, measured in the flesh, are as follows:-Head and body 160 mm.; tail 160; hind foot 34; ear 15.

" 'Klip-muis' of the Dutch. Noki † of the Namaqualand Hottentots.

"Very common, frequenting the rocks on the kopjes and mountains and the slides of loose stones thrown out of the railway-cuttings. Each one seems to have his own hole, and can be seen day after day lying in the sun on some favourite spot in front of it. Often in the early morning several are to be seen up a bush, feeding on the leaves."-C. H. B. G.

23. LEPUS SAXATILIS Cuvier.

J. 452, 520. Q. 525. Klipfontein.

"' ' Rhebok-haas' of the Dutch.

"Frequenting the open flats on the top of the mountain-range, the lower slopes of the kopjes, and the dry river-beds.

"Common, but exceedingly difficult to find without a dog.

"Feeds only in the early morning and late evening."-C. H. B. G.

\* Mamm. S. Afr. ii. p. 73 (1901).
† The "N" of Noki is sounded as a click.

## 24. LEPUS CAPENSIS GRANTI Thos. & Schw.

Lepus capensis granti Thos. & Schw. Abstr. P.Z.S. 1904, no. 2, p. 6 (Feb. 9th).

3. 506, 505, 557, 561, 558, 566, 547. 9. 543, 550, 560, 542, 559, 565, 563, 556. Port Nolloth.

J. 535. Anenous.

General colour above of the head and back "broccoli-brown," with a very faint mauve suffusion. Individually the long hairs are black, becoming lighter terminally; the under-fur "=frenchgrey" at the base, "drab-grey" distally. Sides of the head, shoulders, and flanks "ecru-drab." A few scattered hairs about  $1\frac{1}{2}$  in long bordering the flanks, black proximally, white terminally. Head like back, margin of nostrils and upper lip and a ring round eyes white. Ears distinctly larger than in the true *capensis*, fringed with white hairs, the tips dark brownish black. Nape and base of ears "ecru-drab." Under surface, with the exception of a white patch along the centre of the belly, deep "vinaceous buff." Inner side of thighs and hind feet pinkish buff. Tail as in *capensis*, black above, pure white below.

Dimensions of the type, measured in the flesh:—Head and body 454 mm.; tail 106; hind foot 115; ear 126.

Skull—greatest length 88 mm.; basilar length 67.5.

Hab. of type. Port Nolloth.

Type. Male. Original no. 561. Collected 12 August, 1903.

The common Namaqua Hare proves to be very similar below to the Deelfontein form, while its general colour above is very much that of the true *capensis*.

The four members of the present group may be distinguished as follows :---

A. Nape grey or vinaceous.

a <sup>2</sup> . Back greyer; ear-fringes whitish.	
a <sup>3</sup> . Nape grey	L. capensis.
	L. c. granti.
b <sup>2</sup> . Back and ear-fringes dull buffy	
B. Nape yellow	L. ochropus.

"' Vlackte-haas' of the Dutch.

"Very common on the white and red sand-veldt near Port Nolloth, less so on the lower flats (1774 ft.) near Anenous, while only one was seen on the flats on the mountain-range."—C. H. B. G.

25. Oryctolagus crassicaudatus melanurus Rüpp.

Lepus melanurus Rüpp. Mus. Senck. iii. p. 137 (1845).

 $\mathcal{C}$ . 515, 516, 521, 539, 539 *a*.  $\mathcal{Q}$ . 483, 491, 478, 485. Klipfontein.

This handsome black-tailed Rabbit, which is quite new to the Museum collection, agrees well with the description of Rüppell's *Lepus melanurus*, and may be safely identified with it. Our only doubt is whether Smith's *rupestris*, dating from 1834, is not also the same form, a point which can only be settled when series of young specimens are available for examination.

[Feb. 2,

# 1904.] ON THE ARTERIES OF THE BRAINS OF MAMMALS.

" 'Klip-haas' of the Dutch.

"Frequents the kopjes and mountains, and is nearly always seen among the thickest bushes and bigger rocks. The specimens were mostly secured in the early morning while out feeding on the more open places. The speed with which this animal can get over the rocks and boulders must be seen to be believed."— C. H. B. G.

### 26. PROCAVIA CAPENSIS Pallas.

Q. 449. Klipfontein.

"' Dassie' of the Dutch.

"Although many signs of this animal were seen on the krantzes, very few of them were actually observed and seldom in the same place twice. This may possibly be owing to the previous dry season, which kept them constantly on the move to find food, consequently they were very much scattered and extremely wild."—C. H. B. G.

27. RAPHICERUS CAMPESTRIS Thunb.

Q. 502. Klipfontein.

Q. 549. Port Nolloth.

28. Oreotragus oreotragus Zimm.

J. 495. Klipfontein.

#### EXPLANATION OF PLATE VI.

Fig. 1. Herpestes ruddi, p. 175. 2. Bathyergus janetta, p. 180.

2. On the Arteries of the Base of the Brain in certain Mammals. By FRANK E. BEDDARD, F.R.S., Prosector to the Society.

[Received January 12, 1904.]

### (Text-figures 16–22.)

There has recently been published a comprehensive memoir upon this subject by Dr. Tandler\*, in which previous observations, referring for the most part to single types, are included. Before becoming acquainted with this memoir, I had caused a number of injections of the brain of various mammals to be made, with the view of investigating the subject. I find on examination of my material and notes that I have something to add to the facts and conclusions made known in the memoir of Dr. Tandler; for I have had the opportunity of studying some genera which that anatomist had not at his disposal, and certain parts of the arterial system to which it was not his object to pay special attention.

\* "Zur vergleichenden Anatomie der Kopfarterien bei den Mammalia," Denkschr. Akad. Wiss. Wien, Bd. 67, 1899, p. 677.